



Ontario

Ministry  
of  
Education

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Minister

# Our Schools Go Metric



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Remember when you were a child trying to memorize all those tables of weights, measures and temperatures? "Sixteen ounces equal one pound avoirdupois and twelve ounces equal one pound troy; forty fluid ounces equal one quart; twelve inches equal one foot; water freezes at 32 degrees and boils at 212..."

On the other hand, do you also remember how simple it was to divide and multiply by ten—just by moving the decimal?

If you remember these things you were probably happy to learn that Canada is "going metric"—changing to a system of weights, measures and temperature readings based on that easy and familiar number, ten.

International trade and travel make it important that Canadians share the system of measurement used by the majority of the world's nations. The only major country in the world that isn't officially committed to metric conversion at present is the United States. However, a large number of major U.S. industries have already initiated a metrication program.

The new Canadian standard for measuring temperature is now the Celsius scale: zero degrees Celsius is the freezing point of water and 100 is its boiling point. By 1980, weight, speed, the sizing of clothes, most recipe ingredients—almost everything in fact, will be measured metrically. One of the few exceptions is time, which will continue to be stated in seconds, minutes, and hours.

In support of the federal government's metric conversion program, Ontario schools have already started to "go metric". Teachers in elementary grades are introducing the metric system in many classes and the curriculum of some schools is already totally metricated. In secondary schools, metric measurements are already a part of mathematics and science courses. Ontario's elementary schools expect to complete the change-over to the metric system in 1976, while secondary schools should be predominantly metric by the end of 1977.

Over the past several years, the Ontario Ministry of Education's metric specialists have been working with educational administrators, school boards, teachers, and parents to help plan the change-over to the metric system both in and out of the classroom. While your child is discovering that there are 100 centimetres in a metre, the principal of his school is ordering metre-sticks to replace the old yardsticks used in the school. In addition, school boards and individual schools are appointing their own metric co-ordinators to ensure

that the change-over is as smooth as possible.

Changing over to the metric system might seem difficult for many of us who have grown accustomed to the old measurements. Any change can seem unnecessary if it represents a break with the past. But metrication is a genuine step forward; among other things, it will make mathematics a much easier learning experience. Tables that once took weeks to memorize can now be mastered in days. Does that seem impossible? Here's a sample of how it works.

Many of the words used in metric measurement come from Latin: *centi* means a hundredth and *milli* means a thousandth. The basic unit of length in the metric system is the metre (m)—about half the height of a bedroom door. A centimetre (cm) is a hundredth of a metre, and a millimetre (mm) is a thousandth of a metre. To get some idea of the length of a metre, study the 20 cm rule at the side of this page. Five times its length would be one metre.

Even from one brief example it is obvious that the system is simple and logical. How easily it's accepted by your child, however, depends to a great extent on your attitude toward metrication and toward your school's teaching program. Here's how you can help your child—and yourself.

Learn to "think metric" as quickly as you can. Studies of metric conversion in other countries show that you can learn more by plunging into the metric system than you can by shyly testing the waters, one toe at a time.

—Use the metric system as a way of sharing learning experiences with your children; ask *them* to teach *you*.

—Concentrate on *experiencing* the metric system. For example, if you don't know how much a *litre* is—the metric volume measurement for liquids—make your own litre container. Take an empty two-quart cardboard milk carton, which is 10 cm wide. Using the rule at the side of this page, measure 10 cm up from the bottom of the carton and draw a line across it. Fill the container to that line and you'll have exactly one litre! If your children know you're interested, they'll share other metric learning ideas with you.

—Don't try to figure out how many inches there are in a metre or how many degrees Celsius equal how many degrees Fahrenheit. Mathematical conversion between imperial and metric measures becomes a time-wasting habit that ties you forever to the old system. Even when you're 90, you'll still be using the complex conversion formulas, a practice that takes far more effort than just becoming accustomed to the new





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system. Is it  $25^{\circ}\text{C}$  today? Then it's probably pleasantly warm, a good day for the beach or a family picnic. The best way to understand  $25^{\circ}\text{C}$  is to go outdoors and *feel* it. After all, that's how you learned to judge temperature in the first place.

—Don't go for pre-metric "bargains". As Canada continues to change over to the metric system, many old measuring devices will probably go on sale. Unless you're planning to turn your home into an Imperial Measurements Museum, buy metric instruments when replacing your present scales and thermometers

—Don't take seriously the jokes you hear about cherished old phrases becoming meaningless. We're never going to say "Give a man 25 millimetres and he'll take 1.6 kilometres". Your children's children will still say they "wouldn't touch it with a ten-foot pole", even if they never know exactly what a ten-foot pole is.

If you'd like other general information about metrication, write to the Metric Commission, Box 4000, Ottawa, K1S 5G8. If you want to find out how your school is handling metrication, call the principal. And don't forget to consult your local child. Chances are that he or she already knows many of the answers to your questions about the metric system.